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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET, N.E.
ATLANTA, GEORGIA 30365

Medley
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**SUPERFUND FACT SHEET
ON PHASE II OF THE
REMEDIAL INVESTIGATION/FEASIBILITY STUDY
AT THE MEDLEY FARM SUPERFUND SITE
GAFFNEY, CHEROKEE COUNTY
SOUTH CAROLINA**

August 1990

For More Information
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Several Medley Farm Fact Sheets have been distributed as part of the Agency's effort to keep the local community informed and involved with respect to the Medley Farm Superfund site. The primary objective of this Fact Sheet is to update the public of events since the Agency's public meeting held on May 24, 1990 as well as notify the public of upcoming field activities. A schedule delineating ongoing and upcoming activities is included. A glossary has also been provided for those words highlighted in bold print.

PAST EVENTS

The Agency conducted a public meeting on May 24, 1990 to disseminate the findings stated in the draft Remedial Investigation (RI) Report prepared by the Sirrine Environmental Consults (SEC), the contractor hired by the **Potentially Responsible Parties (PRPs)** to performed the **Remedial Investigation/Feasibility Study (RI/FS)**. The draft RI report was based on field data collected during Phase I of the RI/FS process. The conclusions reported in the draft RI that the Agency concurs with are stated below. These conclusions are based on the data generated as part of Phase I of the RI.

- The geology underlying the site consists of a **saprolite** layer and **bedrock**. Where disposal activities occurred at the site, the saprolite is relatively thick, ranging in thickness from 50 to 70 feet. The thickness decreases towards Jones Creek, here the saprolite ranges from 7 to 28 feet in thickness. The upper portion of the bedrock is fractured;
- The **aquifer** underlying the site is classified as a **Class IIA aquifer**, this classification was made under the EPA Ground-Water Protection Strategy;

- Soils at the site are more highly contaminated in localized areas related to the former lagoons and/or drum disposal areas. The residual chemicals detected in the soils consist primarily of volatile organic contaminants (VOCs) and semi-volatile organic contaminants (SVOCs). Currently, there does not appear to be any overland movement/transport of residual chemicals away from the immediate disposal areas. Soil contamination continues down, vertically to the groundwater;
- Groundwater in both the saprolite and bedrock aquifers are contaminated by VOCs. No other organics were detected in the groundwater. Some metals were present in the groundwater above background levels but it is difficult to disconcert if these elevated levels are the result of past disposal activities or normal conditions due to the unexpectedly high levels of metals in the groundwater from the background saprolite well; and
- Residual chemicals detected in groundwater have not reached the closest perennial discharge areas, Jones Creek. VOCs were not detected in monitor wells installed immediately west of Jones Creek. No chemicals were detected in either the surface water or stream sediments samples collected from the creek. Therefore, no chemicals are currently discharging to Jones Creek.

As discussed in the May 1990 public meeting, it was the Agency's desire to have the PRPs submit to the Agency the draft Feasibility Study by the end of June 1990. A tentative date for the Record of Decision (ROD) was set for late September 1990. However, on June 8, 1990, the PRPs and SEC informed the Agency and the South Carolina Department of Health and Environmental Control (SCDHEC), in a meeting to discuss comments on the draft RI report, that they felt there was insufficient data to complete the Risk Assessment and the Feasibility Study. Consequently, the PRPs requested to initiate Phase II of the RI. After lengthy discussions, the Agency agreed. As a result, the revised RI document will not be completed until November 1990 and the draft FS will be submitted at the end of November 1990. The ROD will be prepared in February-March 1991.

PHASE II REMEDIAL INVESTIGATION

The objectives of the Medley Farm Phase II Remedial Investigation (RI) include:

- Determine the concentrations of contaminants in surface soils to provide data required to complete risk assessment calculations with respect to dermal exposure and ingestion of surface soils;
- Refine the delineation of the former disposal areas to complete the Risk Assessment and provide the necessary analysis of alternative remedies in the FS;

- Complete the evaluation of the hydraulic relationships between the bedrock and saprolite aquifers at the site so that the feasibility and effectiveness of treating the saprolite and bedrock aquifers as a single unit and preventing the movement of additional contamination from the saprolite aquifer into the bedrock aquifer can be assessed;
- Provide additional characterization of the horizontal and vertical extent and concentrations of contaminants in the saprolite and bedrock aquifers beneath the site;
- Confirm ground-water flow patterns for purposes of the Risk Assessment to substantiate that the nearby domestic water supply well (the Sprouse well) has not been impacted by former disposal activities at the site;
- Provide additional characterization of background levels of inorganic constituents in groundwater and soils at the site to confirm that inorganics are not associated with former disposal activities at the site; and
- Confirm groundwater discharge areas.

A summary of proposed Phase II field activities are shown in the table below:

ACTIVITY	QUANTITY
Surface Soil Samples (0 -12 inches)	12 - 15
Saprolite Wells	up to 6
Bedrock Wells	3 - 7
Hydraulic Testing	
Slug Tests (Saprolite Wells)	2 - 5
Water Pressure Tests (Bedrock Wells)	3 - 10
Groundwater Sample Collection with Hydropunch TM	4
Groundwater Sample Collection from Discrete Fracture Zones in Bedrock	6 - 10
Groundwater Sample Collection From Completed Monitor Wells	7 - 14
Physical Soil Analyses	
Moisture Content	10 - 20
Grain Size Analyses	5 - 10
Attenberg Limit Determinations	10 - 20

The following table summarizes the proposed Phase II chemical analyses:

SAMPLE MATRIX/TYPE	NUMBER OF ANALYSES	CONTAMINANTS TO BE ANALYZED FOR
Surface Soil	12	TCL VOC
	12	TCL SVOC
	3	TAL Inorganics
Hydropunch TM / Groundwater	4	TCL VOC
Discrete Interval/ (Bedrock Aquifer Groundwater)	3	TCL VOC
Monitor Wells/ Groundwater	12 - 20	TCL VOC
	2	TAL Inorganics

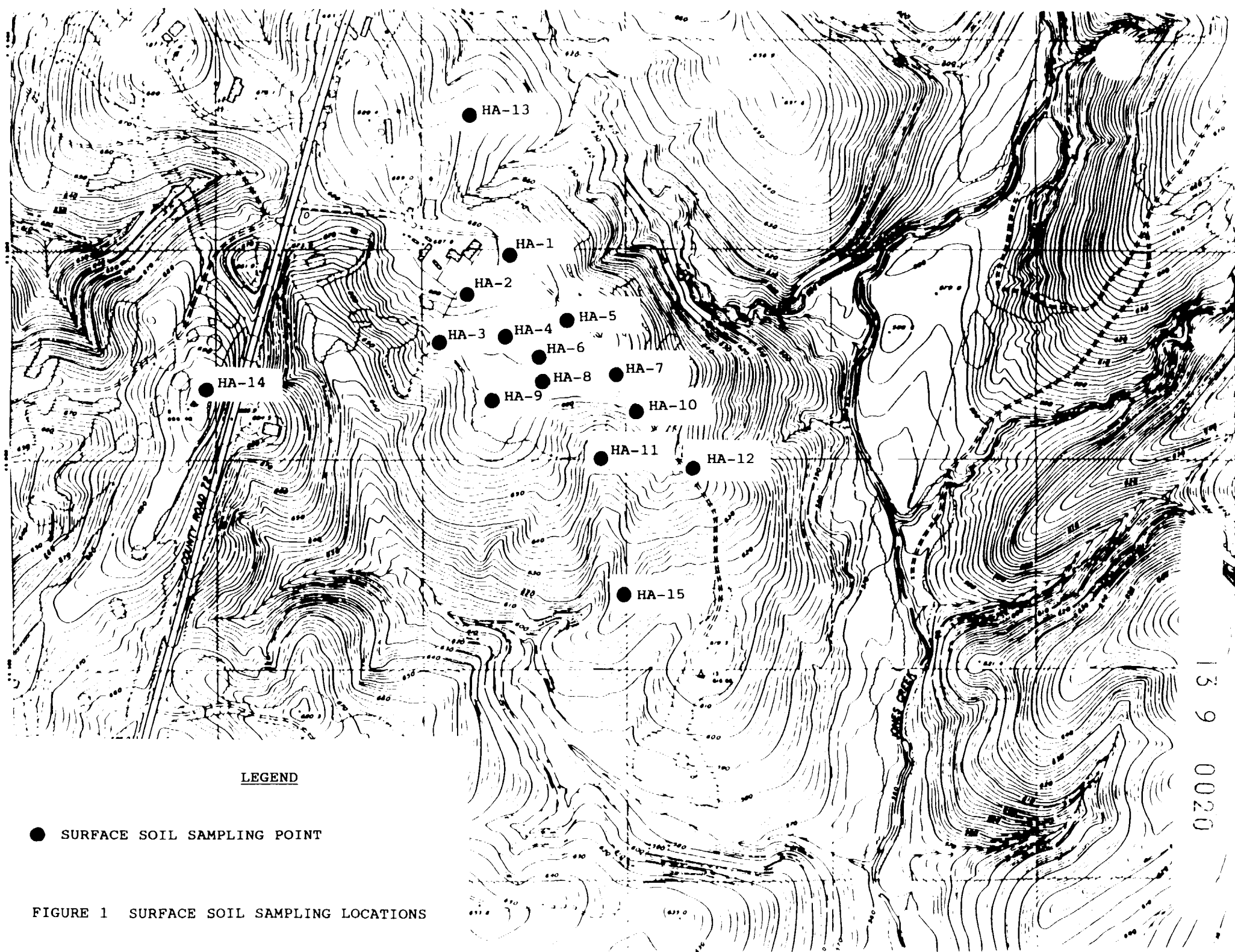
TCL - Target Compound List
TAL - Target Analyte List (metals)
VOC - Volatile Organic Compounds
SVOC - Semi-Volatile Organic Compounds

Figure 1 shows the proposed locations for the surface soil samples and Figure 2 indicates the tentative additional monitor well locations. Figure 2 also provides the rationale as to how the location of a particular monitor well will be determined.

The HydropunchTM will be used to collect the initial saprolite groundwater samples. The HydropunchTM is a recently developed piece of equipment being used in the hazardous waste business.

SCHEDULE

Figure 3 provides a proposed schedule for completing Phase II and the Medley Farm RI/FS. The starting date for this schedule coincides with the Agency's approval of the Phase II RI/FS Work Plan. Approval should be provided to the PRPs prior to the end of August 1990.



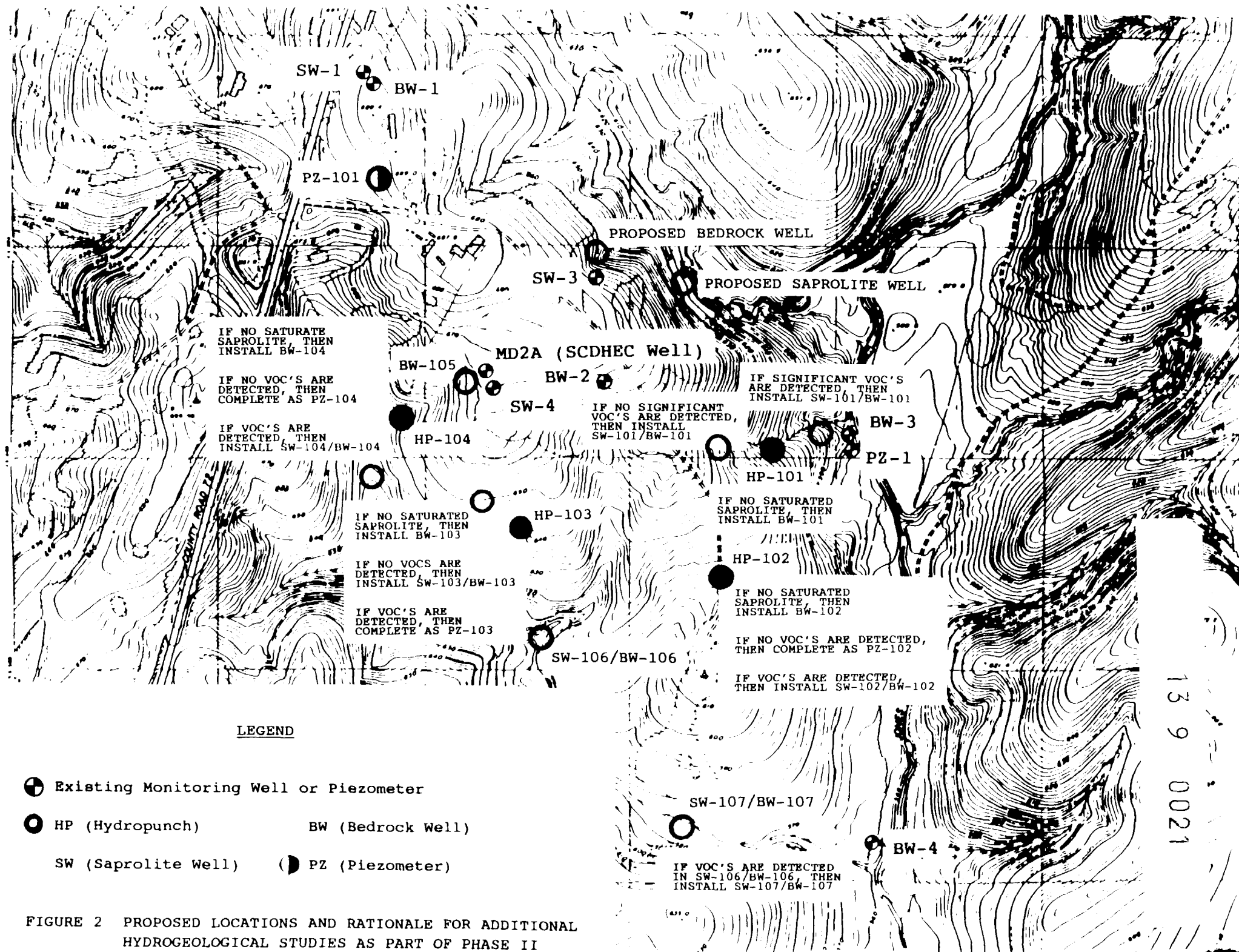


FIGURE 2 PROPOSED LOCATIONS AND RATIONALE FOR ADDITIONAL HYDROGEOLOGICAL STUDIES AS PART OF PHASE II

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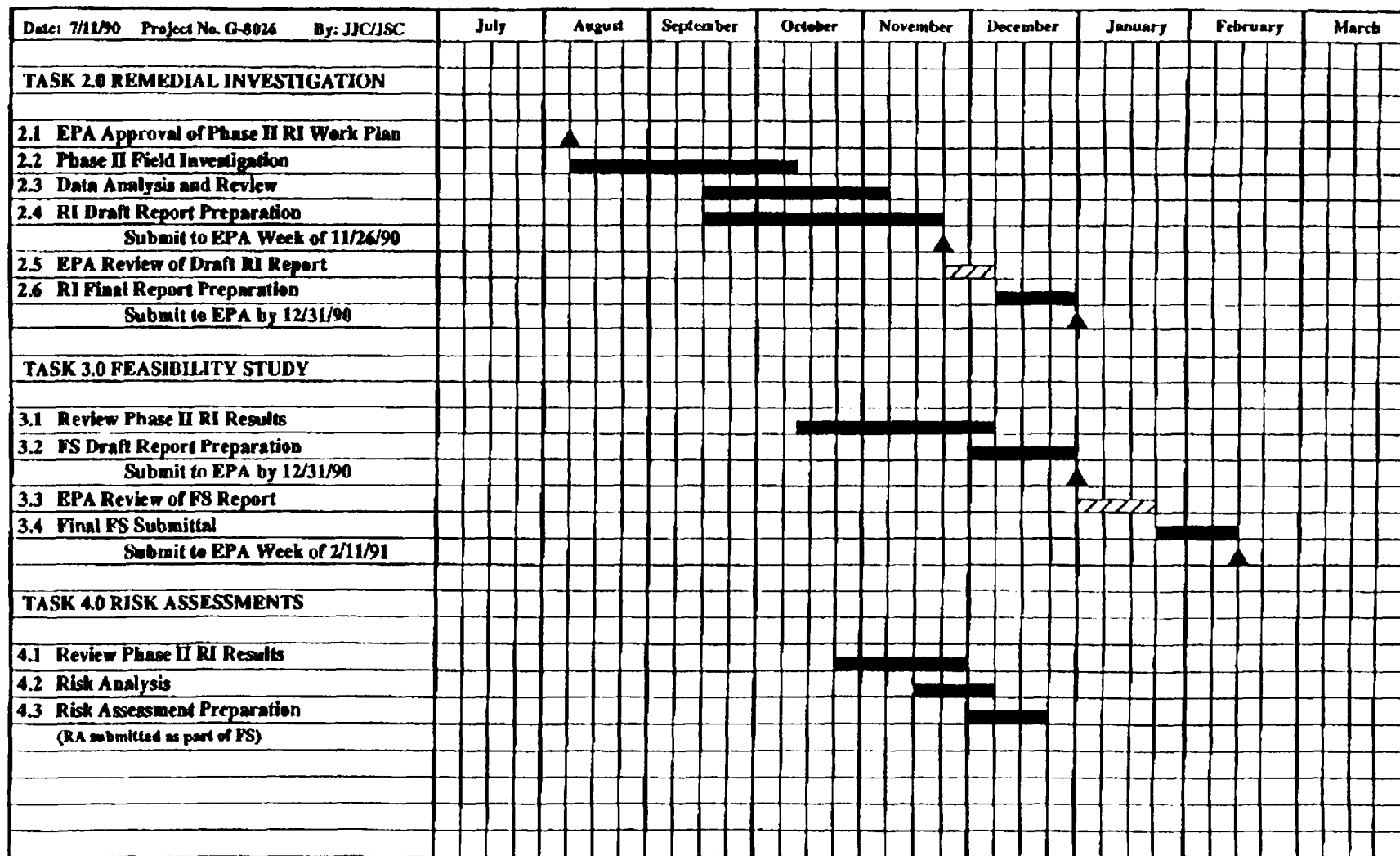


FIGURE 3 SCHEDULE OF ONGOING AND UPCOMING ACTIVITIES AND MILESTONES ASSOCIATED WITH PHASE II OF THE REMEDIAL INVESTIGATION/FEASIBILITY STUDY

GLOSSARY

Aquifer: A layer of rock or soil below the ground surface that can supply usable quantities of groundwater to wells and springs. Aquifers can be a source of drinking water and provide water for other uses as well.

Bedrock: The layer of rock located below the glacially deposited soil and rock under the ground's surface. Bedrock can be either solid or fractured (cracked); fractured bedrock can support aquifers.

Class II: A Class II aquifer is an aquifer currently being used as a source of drinking water

Hydraulic Testing: A variety of tests used to determine the flow direction, interaction, and distribution of surface and groundwater in an aquifer.

Potentially Responsible Parties (PRPs): Any individual(s) or company(s) (such as owners, operators, transporters, or generators) that is potentially responsible for, or contributing to, the contamination problems at a Superfund site. Whenever possible, EPA requires PRPs, through administrative and legal actions, to clean up hazardous waste sites they have created or helped contaminate.

Remedial Investigation/Feasibility Study (RI/FS): The first stage of the Superfund remedial process. The Remedial Investigation determines the extent and composition of contamination at a hazardous waste site. The Feasibility Study is an evaluation of remedial alternatives to cleanup a site.

Record of Decision (ROD): A public decision document that states and explains which cleanup alternative(s) will be used at a Superfund site.

Risk Assessment: A site specific baseline risk assessment characterizes the current and potential threats to human health and the environment that may be posed by contaminants migrating to groundwater or surface water, releasing to air, leaching through soil, remaining in the soil, and bioaccumulating in the food chain. The results of the baseline risk assessment will help establish acceptable exposure levels for use in developing remedial alternatives in the feasibility study.

Saprolite: The overburden on the bedrock typical in the Piedmont province where the Medley Farm is located. The overburden, termed saprolite, is a layer of decomposed bedrock formed in place by chemical and physical weathering.

Semi-Volatile Organic Compounds (SVOC): Carbon-containing chemical compounds that, at a relatively low temperature, fluctuate between a vapor state (a gas) and a liquid state.

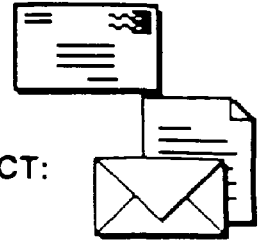
Target Analyte List (TAL): A list of 24 analytes typically analyzed for at Superfund sites. This list includes metals and cyanide.

Target Compound List (TCL): A list of 126 organic compounds typically analyzed for Superfund sites. This list includes volatile organics, semi-volatile organics, and pesticides/polychlorinated biphenyls (PCBs).

Volatile Organic Compounds (VOC): A subgroup of organic (i.e., carbon-containing) chemicals characterized by their greater tendency to evaporate into the air from water or soil.



FOR FURTHER INFORMATION ABOUT THIS SITE, CONTACT:



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